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A DATA DISTRIBUTION MECHANISM IN THE FORM OF INK DOTS ON CARDS

Field of the Invention

The present invention relates to a data distribution system and in particular discloses a data distribution mechanism in the form of Dotcards.

Background of the Invention

Methods for distribution of data for automatic reading by computer systems are well known. For example, barcodes are often utilised in conjunction with an optical scanner for the distribution of corresponding barcode data. Further, magnetic ink scanning systems have particular application on bank cheques which are automatically scanned and the original data determined from the cheque.

There is a general need for a print media scanning system that allows for high volumes of computer data to be stored on simple print media, such as a card, and to simultaneously be able to tolerate a high degree of corruption of the data. For example, the form of distribution can suffer a number of data corruption errors when the surface is scanned by a scanning device. The errors can include:

1. Dead pixel errors which are a result of reading the surface of the card with a linear CCD having a faulty pixel reader for a line thereby producing the same value for all points on the line.
2. The system adopted should tolerate writing errors wherein text is written by the owner of the card on the surface. Such text writing errors are ideally tolerated by any scanning system scanning the card.
3. Various data errors on the surface of the card may rise and any scuffs or blotches should be tolerated by any system determining the information stored on the surface of the card.
4. A certain degree of "play" exists in the insertion of the card into a card reader. This play can comprise a degree of rotation of the card when read by a card reader.
5. Further, the card reader is assumed to be driven past a CCD type scanner device by means of an electric motor. The electric motor may experience a degree of fluctuation which will result in fluctuations in the rate of transmission of the data across the surface of the CCD. These motor fluctuation errors should also be tolerated by the data encoding method on the surface of the card.
6. The scanner of the surface of the card may experience various device fluctuations such that the intensity of individual pixels may vary. Reader intensity variations should also be accounted for in any system or method implemented in the data contained on the surface of the card.

Many forms of condensed information storage are well known. For